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MORBID THROAT AND CONSUMPTION

S. SCOTT ALISON, M.D.

MORBID CONDITIONS

OF

THE THROAT,

IN THEIR RELATION TO

PULMONARY CONSUMPTION.

By S. SCOTT ALISON, M.D.

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LONDON:
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MDCCCLXIX.

157. o. 164.

TO

GENERAL THE HONOURABLE

THOMAS ASHBURNHAM, C.B.

THE FOLLOWING PAGES ARE

Dedicated,

IN TESTIMONY OF REGARD FOR HIS EARNEST AND

ACTIVE SYMPATHY WITH THE SICK;

AND FOR MUCH KINDLY FEELING EVINCED TOWARDS

THE AUTHOR.

PREFACE.

In compliance with a request for a communication which the Editor of the "Medical Press" did me the honour to make, the papers forming this little work were written. These papers have lately appeared in that Journal, and some of my professional brethren having expressed a desire to see them in a collected form, they are now republished.

S. Scott Alison.

85 Park street, Grosvenor square,
1869.

CONTENTS.

CHAPTER I.

PAGE

PRECURSOR—COINCIDENT—SEQUELA—MORBID ANATOMY —EXPLORATION 3

CHAPTER II.

SIMULATOR OF PULMONARY CONSUMPTION — STATISTICS —COARCTATION OF TRACHEA—UVULA—TONSILS . 10

CHAPTER III.

SIMULATOR, CONTINUED—SYMPTOMS—SPUTUM—HÆMOPTYSIS—EMACIATION 16

CHAPTER IV.

ASSOCIATED CACHEXIÆ—SCROFULA—SYPHILIS—GOUT—HYSTERIA—ANÆMIA—PURPURA . . 23

CHAPTER V.

AUSCULTATION—ABSENCE OF CHEST SIGNS—PRESENCE OF NECK SIGNS—ABSENCE OF INTERRUPTED RHONCHUS — CONSTRICTION SOUND — CRACKLE — THE VOICE—THE COUGH 28

these papers most attention will be given to the fourth relation—viz., that of a simulator.

Precursor.—As a precursor, the disorders above-named perform a comparatively unimportant part. In many cases of phthisis declaring itself soon after the advent of the disorders referred to, I am satisfied the priority was more apparent than real, and that tubercle in the lung was really present before the disorders of the trachea were manifested, and that diligent search for the physical signs of tubercle instituted at the first departure from health would have resulted in the discovery of physical evidence of tubercular disease of the lung. I have met with numerous examples of pulmonary consumption in the history of which, it has been declared by the patient that, the first disordered condition was that of the throat and voice, and that the chest was only secondarily affected. These cases have come before me in large numbers, but I have generally found that the amount of disease in the lungs at my first examination has been so great, as to suggest its comparatively long duration, and the probability of its having been really the primary disorder. In fact, the evidence in a large proportion of cases of phthisis in which throat affections have been held as precursors, the pulmonary disease was the real and primary one, and the supposed precursor was truly a secondary one.

In one sense throat affections may be regarded as precursors—viz., as antecedents, for, of course, persons suffering, or who have suffered, from these complaints are, like all others, more or less liable to become affected with phthisis. Many persons who have suffered from throat complaints become the subjects of pulmonary consumption, but these disorders are more truly antecedents merely—that is, independent prior disorders, performing no part in the production of tubercle in the lung. Primary tubercle of the trachea, if it ever occur at all, we have reason to believe, is an exceedingly rare affection, and the ordinary inflammatory disorders of the trachea and the congested and hypertrophied conditions of the mucous

membrane are very different in their nature from tubercle, and seldom or never give rise to it either in the parts primarily disordered or in the lungs. Such is my experience, and such is that of most enlightened practical physicians and pathologists of the present day. True it is, in non-professional parlance, we often hear of neglected colds of the throat spreading down into the lung and producing consumption, and in some not highly esteemed professional writings we read of the same relation. It was Dr. Hunter, of inhalation notoriety, who most recently pressed upon the public this error and false induction.

A Coincident.—Affections of the trachea and adjacent parts do occasionally manifest themselves by hoarseness and other throat indications at the same time that pulmonary consumption gives signs of its development, and the two classes of disorder seem to arise at the same time.

We see this alliance or double development to hold almost exclusively in cases of acute pulmonary consumption. But even in cases of acute consumption signs of tracheal complication seldom develop themselves until the pulmonary and more grave form of disease, together with constitutional disturbance, has held in a marked manner for days or weeks. Therefore as a coincident (beginning at the same time) of pulmonary consumption, tracheal disorder is of comparatively little import.

Sequela.—It is as a sequela of pulmonary consumption that tracheal disorders assume their most grave aspect. Including all forms of pulmonary consumption, and all its stages, we may safely say that few cases are met with which do not present some material evidence of tracheal disturbance.

In the first stage of phthisis the non-implication of the trachea and adjacent parts is most common, but even in such cases a majority will show a not entirely healthy condition of the parts in question. In the second stage a much larger proportion of cases is found to be complicated with these minor affections; and, in the third, nearly every case reveals, either by the voice or by respiratory auscultatory signs, evidence of the implication of the windpipe. The

task of connecting the disorder of the trachea with the more grave disease of the lung in such cases is, on the whole, an easy one. If there be any difficulty it is in cases of phthisis in its first stage. The aberrations from the healthy amount and quality of the respiration sounds of the chest, serve at once, in the latter stages of pulmonary consumption, to indicate the dependence of the minor disorders upon pulmonary mischief.

Of twenty-six cases of all forms of phthisis in all stages of the disease now in the hospital at Brompton, under my care, nineteen, or 73 per cent., give full evidence of disorder of the upper air-tube apparatus.

Some of the local complications are grave, while others are of less serious significance.

Of eighteen cases of phthisis in the third stage, only three are free from implication of the trachea, and other parts of the upper air-tube apparatus. These figures give a percentage of 83.

The diseases of the trachea, larynx, and adjoining parts, which we observe in pulmonary consumption, are almost invariably found to hold this relation, viz.—that of sequela. In examples of acute pulmonary consumption, it is consistent with my observation to say, that the disorders of the windpipe, &c., that occur, depend upon the extension to the parts now involved, of that tubercular vascular over-action which originated in the lungs. This morbid action is propagated by continuity of structures.

In chronic cases of phthisis, the disorders of the trachea, larynx, and adjoining parts, seem to proceed from the production of congestive action from neighbouring irritative disease, and in the second and third stages from inflammatory conditions, sometimes simple and sometimes tubercular, caused by the actual passage of irritant secretions, and the *debris* of destroyed material from the diseased lung over hitherto healthy parts.

The morbid alterations of structure which I have observed in the trachea and the adjacent parts, in pulmonary consumption, are various. These conditions are often

simply an injected and turgid, and somewhat swollen state of the mucous membrane of the rima of the glottis, the epiglottis, the tonsils, and the posterior wall of the pharynx, and of the larynx and trachea. These parts may be all equally affected, but it is more frequently the case that only some parts are materially involved. In the more advanced cases of phthisis the larynx and trachea are chiefly diseased, but in many examples, rapidly progressing to a fatal issue, all parts are implicated. Red and injected conditions, with small elevations of swollen glandules of the posterior wall of the pharynx are common. Indented or serrated conditions of the epiglottis are often presented, and a thin and shaven-off like edging is not unfrequent. A red and scarlet state of the epiglottis, resembling the petal of the scarlet geranium, is often met with. The larynx is often inflamed, congested, ulcerated, and totally, or almost totally, deprived of its vocal cords. A very general condition, in extremely bad cases, is one of total loss of the cords, with deep ulceration between the thyroid and cricoid cartilages, and a general ulceration, and rough or granulated surface of the entire mucous membrane of the larynx.

The symptoms during life attending the allied disease of the trachea, &c., are, in slight cases, huskiness and occasional hoarseness, sense of irritation in the throat, and more or less frequent attempts to clear the parts of mucus, producing a sound like the word "hem," more or less forcibly formed. The hoarseness frequently becomes continuous, and when ulceration of the larynx is extensive, aphonia or whispering is produced. When the vocal cords are totally destroyed, the aphonia is complete, and the attempt to speak simply produces a roaring and inarticulate sound, very painful to hear. In these latter cases deglutition is painful, and when the epiglottis is greatly ulcerated, particles of food are wont to fall into the larynx and to give rise to partial suffocation, and to severe local convulsive efforts.

An œdematous state of the rima glottidis is occasionally

found in the last stages of pulmonary consumption, and this gives rise to great difficulty of respiration. The lung is not duly inflated, and it is impeded in the expulsion of its æriform contents. The voice is destroyed, or becomes whispering, and the sound of respiration heard through the medium of the open atmosphere, or through the stethoscope placed upon the neck, is hissing and constricted. The greater intensity of the hissing or constriction at the immediate region of the glottis, points to the seat of the constrictive disease.

Tubercular matter, grouped in masses even so small as mustard-seeds, I have never seen in the larynx and trachea, and this product seems, when deposited, to affect very fine forms, scarcely visible to the naked eye, such as I have observed in the aorta and pulmonary artery. The distinct masses of tubercle which we find imbedded in the mucous membrane of the bowels, both small and large, I have never seen imitated in the mucous membrane of the tubular apparatus leading to the lungs. The addition of important throat affections to pulmonary consumption adds seldom to the danger of the patient, but exposes him to grave inconvenience. Difficulty of swallowing tends to hasten dissolution.

The discovery of even advanced disease of the lung is in some cases impeded by the presence of strongly marked signs of disorder of the trachea, &c. The coarse and loud constrictive respiration sound through the upper portion of the air-tube apparatus, tends by descending into the lung structure to mask fine and single humid crackles in cavernules and in cavities. The cavernous voice is with some difficulty made out in cases marked by partial aphonia, and weak and whispered voice. The articulated voice, superficial and very near so valuable as a sign of cavity is, of course, lost in cases of aphonia. I have seen several cavity cases in which, even after very diligent exploration, I have been left in doubt until a second examination has been made. The proportion of such cases is small, for careful listening will generally detect some

amount of crackling, either cavernulous or cavernous, and the voice over the diseased lung will generally show an unusual amount of distinctness and nearness. Besides in advanced softening and in cavity cases, the motion is reduced, and the percussion is either dull or of manifestly short duration. Coughing will sometimes give the requisite evidence. In cases of tubercular perforation of the pleura, the amphoric respiration and voice, and the clear percussion at first throughout the diseased side, and in the stage of effusion the clear percussion above, and the absolutely dull percussion below, will almost always suffice to lend certainty to the judgment.

It is right, however, to mention that cases of cavity do sometimes present themselves in which the cavity has been altogether overlooked when such oversight is scarcely to be justified, and this has happened from the marked character of the throat complication causing the chest to be exempted from all exploration. Since very much attention has been given to the laryngoscope, and so much time expended upon its use, these over-lookings seem to have become more than usually frequent. Perhaps this is in some measure to be explained by the fact that, the laryngoscope has been largely adopted, and most usefully too, by some members of the profession, who had not previously seen much disease of the chest, or been familiar with the methods of exploration of that portion of the body. Such oversights are not only an injustice to the patient, but discredit the medical attendant, and are likely to prove injurious to him. To avoid all chance of such results it should be made a rule that, in cases of throat disease of any importance, either through the urgency or intractability of local symptoms, or suffering of the general health, the entire chest should be subjected to the tests of expansion, percussion, and auscultation, I would say of *differential* auscultation. With this chest examination such errors will not often occur, and should disease subsequently manifest itself, it will be felt that non-discovery did not rest upon culpable neglect.

CHAPTER II.

SIMULATOR OF PULMONARY CONSUMPTION—STATISTICS—COARCTATION OF TRACHEA—UVULA—TONSILS.

I NOW come to disease of the trachea and larynx and adjoining parts in their relation to pulmonary consumption as a simulator. This relation it is the great object of this paper to exhibit. Throat affections, when simulating pulmonary consumption, present that relation that is most interesting, inasmuch as they give rise to suspicion of dangerous disease that does not exist, constantly give way under skilful treatment, and carry away with them every fear of pulmonary mischief, or remain only for a time without impairing the value of life. These simulative diseases give scope to the exercise of that *examen eruditum* which enables the physician to declare with certainty the existence of only minor and generally curable disease, and the absence of a complaint most generally fatal. How useful and comforting this skill proves to the patient and to his friends, how valuable in many aspects—as, for instance, in relation to business affairs, to arrangements in domestic life, to travel, to place of residence, to life assurance, the value of annuities and reversions, and how pleasing it is to the physician, and how creditable to that art to which many are even now so prone to affix the stigma of incompetence.

That it is a common thing for purely throat affections to simulate chest disease, and more especially pulmonary consumption, I may safely say. Amongst some forty patients always under my care in the Brompton Hospital, I constantly have some who have, as far as I am able to judge,

no disease whatever of the chest. During the eight years I have had the charge of in-patients, I have constantly had to record the absence of all pulmonary mischief, and the presence only of disorder of the trachea and other parts of the upper portion of the air-tube apparatus. These patients have been kept under observation a reasonable time to admit of further and repeated examination, and have not been dismissed until the most careful further scrutiny has confirmed the original diagnosis.

I have constantly had occasion to recommend the early dismissal of patients under such circumstances, and in no case have I heard that the dismissal turned out to be unfortunate—that is, was followed with evidence of disease of the chest. Such cases, it should be added, have been sent to the hospital often as consumptive ones, and with medical certificates.

At present there are in the hospital under my care six patients with affections of the upper air-tube apparatus simulating more or less strongly pulmonary consumption; three are females and three are males. The chief morbid conditions are injected pharynx, enlarged tonsils, and congested condition of the trachea. The total number of patients is 43, and these six cases give a percentage of 14. The total number of pulmonary consumption cases is 26, and the six cases of simulated consumption with affections of the upper air-tube apparatus give the result of 23 per cent. to the cases of pulmonary consumption in the hospital under my care.

One of the most common forms of disorder of the trachea and other connected parts is a state of vascular congestion of the trachea, larynx, and glottis, conjoined with nervous irritability and spasmodic action. Sometimes there is associated a general deterioration of the health and some loss of flesh. Sometimes the general health is good and the nutrition of the body is unimpaired, but in this latter case there is less likelihood of consumption of the lungs being successfully simulated. A condition of trachea giving rise to suspicion of tubercle of the lung, involving the form and

calibre of the trachea, has frequently come under my notice, and I rather think has received little or no notice from pathologists. This condition is one of constriction or narrowing of the tube immediately above the bifurcation. The reduction of the calibre begins about an inch above the bifurcation, increases for half-an-inch, and then gradually reduces in the direction of the bifurcation. The extent to which the narrowing occurs varies, but it is very manifest to the eye in many cases. The narrowing affects the whole circumference of the tube, and does not proceed from projections at particular spots. The cartilages remain of the normal length, the soft parts of the posterior wall only being reduced in breadth. This narrowing of the back wall devoid of cartilage is very obvious, and depends generally upon an undue amount of muscular contraction. No morbid lesions are found, saving narrowing and signs of over-vascularity and some thickening of the mucous membrane. When the measurements of the contracted part are compared with the the joint calibre of the two bronchi at the bifurcation they are found to be greatly deficient. The calibre of the narrowed part is also found unduly less than that of the trachea in its upper part. It should be mentioned that in health the trachea is narrower below than above, and the calibre of that part is less than the joint calibres of the two bronchi.

The excessive narrowing of the trachea gives rise to a certain continuous difficulty of respiration, great sense of oppression in the upper front part of the chest, including the region of the sternum. The difficulty is liable to exacerbations, on exposure of the patient to cold, and on occasions of increase of vascular congestion or of spasmodic action. This narrowing gives rise to difficulty in inspiration and also to difficulty in expiration. It is this condition of narrowing which so frequently leads to emphysema of the lungs—a state occasionally associated with tubercle. The expiratory effort is opposed by the obstruction offered to the column of air in course of expulsion, and the tender walls of the lung air-vesicles give way, dilate, coalesce,

and give rise to wheezing lung expiration, sibilant and sonorous rhonchi, imperfect oxygenation of the blood, in some cases purple countenance, and laboured and inefficient action of the heart, often accompanied with dilatation and softened flabby walls of that organ. The respiration through the trachea is highly noisy and constrictive, and this applies to the expiration as well as to the inspiration. The seat of the most intense constriction sound is immediately close to the sternum, where the stethoscope should be placed.

This morbidly narrowed condition of the trachea from its causing shortness of breath, serves to suggest the idea of consumption, and when it is associated with streaky hæmoptysis, which it sometimes is, with cough, general derangement of health, and loss of flesh, the idea of tubercle of the lung acquires strength with non-professional people, and even with medical men, who neglect the careful employment of auscultation and of other exploratory tests. The excessive shortness of breath in such cases, coupled with only moderate wasting of the body, the highly constricted respiration sounds in the throat, and the almost normal state of the respiratory, voice, and percussion sounds of the chest, and of the shape and movements of that region, permit little doubt to rest in the mind of the practised physician as to the comparatively safe nature and generally local character of the disease, and as to the absence of tubercle in the lung.

It may serve to guard the young practitioner, however, to say here that such a narrowing of the trachea as has been described above, is sometimes associated as a sequela of tubercle of the lung, but exploration of the chest will easily establish this coincidence when it occurs.

In the healthy state, the trachea presents a difference in its volume at different parts. An inch above the bifurcation, on careful measurement of a healthy trachea, I found that a cord passed over the exterior measured three inches, while a cord passed round it immediately above the bifurcation, measured only two inches and seven-tenths.

The capacity of the trachea immediately above the bi-

furcation is greatly less than that of the conjoined capacities of the two bronchi at their origin. The internal circumference of the trachea at this spot, I found on careful examination of a normal organ, to be two inches and two-tenths, while the conjoined internal circumference of the two bronchi amounted to three inches and three-tenths.

The right bronchus exceeded in its internal circumference the left by one-tenth of an inch.

Stricture and constriction of the trachea have been referred to in various works on the throat, but these morbid conditions, as there described, have been more restricted and partial than the constricted condition of the trachea which I have endeavoured to describe. The partially constricted condition of the trachea, which proceeds from tumours and foreign bodies *in* the tube, and from tumours *outside*, and from injuries by violence, are, of course, altogether distinct from the narrowing of the trachea, which I have desired to bring under the notice of the reader.

Hypertrophy and engorgement of the mucous follicles of the posterior wall of the pharynx have been, in some cases of suspected pulmonary consumption, the only pathological conditions discernible under the most careful and repeated exploration. The posterior wall has been seen roughened and unduly injected, presenting an unusually florid colour, or an undue clarety aspect, together with enlarged and varicose venous twigs.

The uvula, in some few examples, has been the only structure that has presented a morbid condition ; generally it has been injected, often it has been hypertrophied ; sometimes, on the other hand, it has been greatly reduced in size, or totally obliterated. This part has often been found unduly long, occasionally clubbed at its extremity, but more frequently tapering to rather a fine point, membranous and almost transparent.

The tonsils, in numerous examples of merely simulated pulmonary consumption, have been the only parts which, under diligent and repeated examinations, have presented a morbid condition. The morbid condition has varied,

but in most examples it has been one of considerable enlargement, undue redness and vascularity, with numerous depressions, as if scarred, or chopped, or pock-pitted. This state has usually been shared by both tonsils, but occasionally it has been confined to one. When both tonsils have been enlarged to the size of walnuts, they have, by approaching each other, greatly contracted the entrance into the pharynx, and interfered with the free pendency of the uvula. In such cases the voice has had an unduly nasal tone, and some little difficulty has been experienced in swallowing. The respiration through the trachea in most cases has been highly constrictive, and I have observed in a majority of the patients a sensible amount of hardness of hearing.

That cases such as the above are sometimes treated as examples of pulmonary consumption, there is no doubt whatever. The cough, the occasional streak of blood, and the impediment to free perspiration, suffice to this end. Such cases of simulated pulmonary consumption are common in children, and in young persons about puberty.

A girl about 12 years of age came into the Rose ward lately with such a condition of tonsils as has been described. She was rather plump. No sign of tubercle of the lung being made out, I enquired more particularly into her history. She had come to the hospital from a place in the country many miles from town, and she informed me she had seen (I believe) some eleven doctors. It was clearly a case for surgical aid, and Sir W. Fergusson, the surgeon to the hospital, being sent for, removed the hypertrophied parts, and the patient was then sent home, carrying with her no signs whatever of chest disease recognizable by myself, the house-surgeon, or my clinical assistant.

CHAPTER III.

SIMULATOR, CONTINUED — SYMPTOMS — SPUTUM — HÆMOPTYSIS — EMACIATION.

THE symptoms which enable such conditions of the throat to simulate tubercle of the lungs are many, and the physical signs are not very few which give rise to the same result.

Cough is one of the symptoms which is calculated to deceive in the diagnosis. This is almost always present, and is generally frequent, occurring in the morning, and repeating throughout the day. Sometimes it occurs at night, but this is comparatively seldom, and the patient may sleep many hours uninterruptedly. The cough in its character is generally short and dry, and is rarely marked with long, violent, and repeated expulsions of air from the chest. The cough-sound sometimes resembles a subdued hissing issuing from the glottis; sometimes the sound is an abrupt explosion one, single, or at least distinctly divided. The sound also combines, in many cases, a ringing, metallic-tube character. Sometimes the cough assumes a decided loud, snappish, dog-barking character. In cases of morbid narrowing of the trachea, the cough assumes a constrictive sound distinctly traceable to the trachea.

"Hemming" is a frequent attendant of simulating throat affections. In some cases the local voluntary muscular effort which produces this noise is almost unceasing. From early morning till the moment of sleep it is to be heard, and while it seems to afford only a little relief to the patient, or serves to bring up only a very small amount of mucus from the larynx and the lower part of the pharynx, it succeeds in causing great and wearing-out annoyance to those placed

about the patient. In most cases this "hemming" is comparatively faint, but in some others it assumes a very harsh character, and may more properly be called "hawing," from the similarity of the sound of the muscular effort to the coarse sound of this word when pronounced in the ordinary or coarse, prolonged manner. This variety of hemming is almost intolerable to the ear at all raised above that of the ordinary savage.

Sneezing, which I find is a rare accompaniment of pulmonary consumption, is not an infrequent attendant upon throat disease, simulating the more grave affection of the lungs

Sputum.—Sputum to some amount marks the throat affection simulating pulmonary consumption. Generally the sputum is moderate in quantity. It is brought up with difficulty for the most part. Judged of by the patient's feelings, it appears to come from the glottis, the larynx or trachea, or from the posterior part of the mouth—*i.e.*, the pharynx. In ocular appearance it is often mere thickish froth, with minute air-vesicles, and white in colour. Very often the sputum, still scanty, is formed, so to speak, of so many lobules, coherent, somewhat transparent, destitute of air-vesicles, and having small points of black material studded throughout, the general aspect being that of washerwoman's prepared starch, but presenting a certain nodulated appearance. It may be said also to resemble prepared or boiled sago. This sputum is the secretion of the glands situated in the trachea, and at the bifurcation of that tube. The black particles are not composed merely of soot and other extraneous bodies deposited from the inhaled atmosphere, but is in part an organic production—a carbonaceous corpuscle, much larger than the mucus one, well worthy to be submitted to the microscope by the student.

In some cases the sputum is pretty copious, and consists of mucus of a gelatinous or glutinous character, having only very few air-vesicles. The colour is usually faint yellow, or green. This is expectorated with a full, easy

cough. The tubercle corpuscle and the elastic curly lung fibre of course are absent.

Hæmoptysis, though a form of sputum, is usually treated of separately. For the most part, in throat disease simulating pulmonary consumption, the hæmoptysis is slight, and appears continuously for some days to intermit and then to appear again. It seldom comes on without coughing or hemming exertions. It is usually scanty, appearing in quantities sometimes amounting to a drachm, of a florid colour, and in a liquid form. Generally the blood is of a bright arterial colour, and simply tinges frothy mucus, or streaks yellow or green mucus. In some cases of throat affection simulating tubercle of the lung which have been treated by me in the hospital, blood has been expectorated to the extent of an ounce or two in that institution, and under close inspection; and in some of the cases, more especially of young women in whom the catamenia had been irregular, it has been stated that, on one or more occasions several ounces of blood have been expectorated. In the case of some young men with highly congested fauces the same thing has been related.

The discharge of blood from the throat and adjacent parts has generally taken place at the time of coughing; but in some examples the blood has come without any respiratory effort, and this, too, takes place chiefly in the morning, on awaking. The blood is generally arterial, but I have seen it dark and coagulated. When dark and coagulated inspection of the fauces has not unfrequently detected dark clots adhering to the posterior wall of the pharynx, and the mucus membrane itself in a highly roughened and congested state.

The blood issues from various parts; in most cases it proceeds from the highly injected mucous membrane of the trachea, often, I believe, near its bifurcation. I have frequently heard fine crepitation over the trachea in such cases. The tonsils are sometimes the seat of the discharge. More frequently the blood comes from the pharynx. In such cases the blood may sometimes be observed *in situ*.

I have, at the present moment (Feb. 4), a young woman in the hospital, affected with chronic hemiplegia, suffering from throat disorder simulating phthisis, on the posterior wall of whose pharynx I observed, on the first examination, a large clot of black blood resembling a fungous growth. This was got rid of in a day or two. The patient had been sent to the hospital under the impression that she was suffering from lung disease, a certain amount of emaciation, cough, and general debility, leading to this idea. No evidence whatever of departure from the healthy condition of the chest signs was procurable in this case, excepting a moderate amount of harsh respiration at the apex of the lung, and a certain amount of unduly prolonged expiration in that quarter, all due to disorder of the trachea and adjoining parts.

The discharge of blood in many cases is greatly promoted by a morbid state of the circulating mass.

The Voice.—The voice has been generally affected in the class of cases under consideration, but this has usually been to a moderate extent. In a few cases, however, the change in the voice has been very great. Sometimes the change in the voice has been only occasional, but in some, and in the more grave examples, it has been almost permanent.

The conditions of the voice most frequently noticed in these cases are, weakness, huskiness, indistinctness, continuous hoarseness and discordance. There may be almost total loss of it.

The weak voice is often connected with mere congestion of the trachea and larynx or some tumefaction and dryness of the parts. The *loss* of voice is generally mixed up with œdema of the glottis, paralysis of the muscles and ulceration.

A total but temporary loss of voice is liable to occur in the case of females, when they have been exposed to mental excitement, and this condition is occasionally remarked under mere moderate changes of temperature and moisture of the atmosphere, and under the influence

of moral causes. I have now in the Rose Ward (May, 1868), a young woman sent to the hospital for chest disease, who has no appreciable disease there, whose voice is scarcely audible, and this depends merely on a dry condition of the larynx and glottis, and some temporary debility of the muscles of the larynx. The laryngoscope shows no organic alteration. Galvanism has been employed, but without any beneficial result.

The general health in the cases of disorder of the trachea and adjacent parts which simulate pulmonary consumption is generally disturbed, and this disturbance is one of the chief reasons for the entertainment of the opinion that tubercle of the lung is present. The chief forms of disturbed health with which I have met, are the following :—

Emaciation.—Emaciation is generally present and to some material extent. In some cases the patient is merely rather thinner than before, but in others the loss of flesh is marked ; the roundness of the body is lost, and is replaced by obvious angularity and stringiness. It is this loss of flesh, conjoined with cough, which first suggests to the relatives and friends of the sufferer the suspicion of consumption, and it is this which causes the medical attendant to fear the presence of tubercle in the lung. In most, but by no means all, the examples of disorder of the trachea and other parts of the air-tube apparatus, which have seriously simulated consumption of the lungs, this loss of flesh has been present. It is right, however, to say that cases of simulated tubercle of the lungs have come into the hospital in which not only no emaciation was observable, but cases have been admitted from time to time in which the patient was not only in fine condition, but in respect of muscle and fat above the average.

The loss of flesh in such cases is less remarkable than the almost sudden regaining of it in the hospital. Very few of the patients have remained above a very short time under treatment without gaining a great increase of weight. Two or three pounds in weight have been gained

in the course of a week or two by young females. As much as a stone in weight has been the increase in the course of two months. It was only a few days back that a young girl, sent in as consumptive, affected only with tracheal congestion, marked by cough, huskiness of voice, and some loss of flesh, was found to have acquired no less than 17 lbs. This great increase of weight forms a valuable piece of testimony in favour of the healthy condition of the lungs, and of the restriction of disease to the air-tube apparatus. But it is never to be forgotten that this testimony is not conclusive by itself, for I have known cases of tubercle of the lung, even with cavity, to be marked by a very great increase of weight, as much as two stone in the course of a few weeks. The *permanency* of the increase of weight in disorders of the upper air-tube apparatus is worthy of note. The improved weight remains, but in cases of tubercular excavation it is otherwise in general. Within a week or two of leaving the hospital it is common for the tubercular patient to lose many pounds, and I have commonly noted, on the re-admission to the hospital of tubercular patients, who had gained much increase of weight, a remarkable and obvious emaciation, and that the period of a year of comparative exposure, inferior diet, and non-attention to exhausting symptoms, had sufficed to cause a loss in weight of one or two stone, not now to be readily rectified for the second time, or at all to be replaced.

There is seldom present, in the class of cases under consideration, a material increase in the rate of respiration. But there is a difficulty of respiration both in the act of inspiration, and in that of expiration; and this is referred, without hesitation by the patient, to the throat. The act of inspiration is prolonged, and so is the expiration through the trachea. In tubercle of the lung the respiration is generally quickened.

The Circulating Organs.—The heart's action is seldom accelerated, and the pulse is usually of moderate rapidity, and is regular. In tubercle of the lung the pulse is usually

quickened, and the heart more or less excited, except in chronic cases.

Digestive and Supplementary Organs.—In mere disorder of the trachea and adjoining parts, the digestive organs are seldom morbidly affected. The vomiting in early tubercle of the lung, and the persistent diarrhœa of the same disease in its latter stages, are seldom simulated, but these conditions are sometimes present.

The Skin.—The integument of the body in the simulating disorders, is generally healthy. There is no approach to the harsh and dry condition of the chronic form of tubercle of the lung in the wasted patient, nor to the moist, and soddened, and heated skin of the lung-tuberculated patient, suffering from the disease in its active form, and accompanied with irritative fever.

The hair, in examples of disease described above, simulating pulmonary consumption, seldom suffers, which is different from what is observed in phthisis, in which disease it is seldom long unaffected, becoming weak, and falling out to a great extent, especially in acute cases, to the great vexation of the patient, particularly the young female.

The temperature of the surface of the body, in the simulating disorders, is seldom heightened, and in this respect we note a difference in connection with tubercle of the lung, for in this disease the temperature is usually increased, as has been recently very fully established by many painstaking physicians.

Generative Organs.—The disorders of the generative organs common in tubercle of the lung, are seldom noted in mere simulating complaints of the trachea. The catamenia is comparatively seldom suppressed, less frequently than they are in tubercle, and the debility of the male sex, common in tubercle, is also seldom or never observed in the minor disorders.

CHAPTER IV.

ASSOCIATED CACHEXIÆ—SCROFULA—SYPHILIS—GOUT—HYSTERIA—ANÆMIA—PURPURA.

WITH these local affections of the upper air-tube apparatus there have been associated in my experience, in a large proportion of cases simulating pulmonary consumption, certain morbid conditions of the whole system. The scrofulous, the syphilitic, the gouty, the hysterical, the anæmic, and the scorbutic conditions have been found in many cases.

In examples of enlarged tonsils the scrofulous taint has been conspicuous, and in such cases there have often been associated a full state of the soft parts at the angles of the jaw, enlarged cervical glands, a thickness and indistinctness of speech, some dulness of hearing, and a certain amount of stupidity of expression. The scrofulous cachexia, associated with simulated pulmonary consumption, has frequently presented the local manifestations of humpback, curved spine, and the prominent sternum found in the pigeon-breasted.

Cases of throat disease associated with the humpback and the pigeon-breast have often perplexed me, but I have most generally found reason to believe that no tubercle of the lung had ever existed. It has usually been obvious, after long observation, that the cough, even the hæmoptysis, and the difficulty of respiration, were due to tracheal and bronchitic congestion, together with that impediment to respiration and to the circulation of the blood necessarily incident to the deformed, and the compressing conformation of the thorax.

The syphilitic taint has prevailed in cases of atrophied

or obliterated uvulæ, wasted velum palati, sometimes perforated with foramina, of hoarse and discordant voice, general deterioration of health, and copper-coloured spots upon the integument of the chest, in young men and middle-aged females.

The gouty taint has shown itself in connection with enlarged glandules of the pharynx, and conjoined with rather free secretion of yellow or green sputum. Eczematous and herpetic eruptions of the skin have marked these cases, as have also arthritic complications, and an excessive amount of lithic acid in the urine.

The hysterical or quasi-hysterical condition has evinced itself chiefly in connection with young persons, not always females, suffering from tracheal congestion and narrowing of the trachea, marked by some occasional dyspnœa, varying hoarseness of voice, and loud snapping and barking and shrilling cough, accompanied with only very little sputum. The patients have been weakly and delicate, excitable in mind as well as body. Constipation and limpid urine have frequently marked these cases.

Aphonia, dependent upon partial or complete paralysis of the muscles of the larynx, has been conspicuous in the hysterical, but with improving general health and with local stimulation, the voice has generally been restored, sometimes gradually, sometimes suddenly.

The anæmic state has been very commonly observed associated with rough conditions of the pharynx, scanty sputum, pallid lips and cheeks, and velum palati, venous thrill and murmur, systolic murmur at base of heart, palpitation of that organ, œdematous feet, red, polished tongue, gastric irritation and vomiting, and scanty, irregular, or arrested menstruation. The anæmic state has, in a large proportion of cases of simulated pulmonary consumption, been associated, not only with internal morbid conditions of the upper or cervical part of the air-tube apparatus, but it has been conjoined with an enlarged and flabby state of the thyroid body in females. This has formed, as it were, a cushion, placed pretty well round the entire throat, most

prominent in front, but in no inconsiderable proportion in the lateral regions. In many cases the swelling has been uniformly soft, but in some it has presented comparatively firm nodules, chiefly in front. Such examples of associated enlarged thyroid body have come from all parts of England, but most have come from the Midland Counties. One example came from Aberdeen, in Scotland.

We recognise the anæmic condition by the pallor of the surface of the body, the lips, soft palate ; the conjunctivæ of the eyes ; thrilling and murmuring or hissing in the veins of the neck, and by gentle blowing at the base of the heart. But we are not to conclude that anæmia is not present because we find no murmur, or hissing, or humming in the neck, for anæmia, to a great degree, may hold when these signs are absent. The pallid lip and velum palati, and conjunctivæ over-glistening, alone may be accepted as evidence of this condition. The venous murmur in the neck, and the basic systolic blowing of the heart, are more especially found in the young and excitable with active hearts, conducing to rapid currents of blood, while in the older and more passive patients, with feeble, inactive, flabby or fatty hearts, conducing to slow currents of blood, an equally great amount of anæmia is seldom signalised by these adventitious sounds. We must, therefore, not conclude, because an elderly pallid female, with slow heart, does not present the venous murmur, that she is not anæmic, or withhold suitable constitutional treatment.

Taken all in all, in cases of doubtful pulmonary consumption, marked by throat symptoms and signs, I regard the presence of the venous murmur and basic blowing as a weight in the balance—it may be a small one—in favour of the patient, for I have not found this sign to prevail markedly—*i.e.*, with marked frequency, in well-ascertained cases of pulmonary consumption.

I have to-day (July 4th) examined, at the Brompton Hospital, sixteen of my female patients, all that were in the wards at the time, with a view to the discovery of venous murmur. I have found only two patients present-

ing the venous murmur out of ten suffering from pulmonary consumption in its second and third stages. Out of six patients not tubercular, I find four who present the venous murmur well developed. Five of these non-tubercular patients suffer from various moderate disorders of the upper air-tube apparatus. The sixth suffers from obstinate hæmoptysis, and ulcer or malignant disease of the stomach, marked by thorough intolerance of food on the part of the stomach, necessitating the daily employment of Liebig's extract of meat by enema. Two of the patients suffering from disorder of the throat and anæmia present enlargement of the thyroid body. Two patients with pulmonary consumption, in its third stage, offer the thyroid body also enlarged, one very voluminous reaching nearly round the entire neck, and mounting to the vicinity of the lower jaw.

Three examples of venous murmur out of five patients suffering mainly from throat affection, give the percentage of 60 ; while two examples of venous murmur, out of ten patients suffering from pulmonary consumption in the second and third stages, give the percentage of 20 only.

The comparative absence of anæmic signs in pulmonary consumption, which I have ascertained, coincides with another fact which I made out many years ago when I was a student of King's College Hospital—viz., that the blood of the consumptive, as proved by analysis, is, in most cases, unusually rich in red globules, and super-abounding in fibrin and albumen. The patients whose blood was examined were advanced in phthisis ; the conjoined inflammatory affections of course would increase the fibrin.

Another morbid condition of the system, but more particularly applying to the blood, viz.—the scorbutic or Purpura state, is sometimes associated with these local disorders, simulating pulmonary consumption. This state is found in cases marked by general deterioration of the health, emaciation, purplish state of the surface and local hæmorrhages. This condition has more generally been found in cases marked by hæmoptysis, and has prevailed in sailors and in young persons who have been

utterly neglected in respect of diet as well as of pure air and cleanliness. In such cases the blood is more than usually liquid, from a deficiency of fibrin and of coagulability. The catamenia in these examples has usually been copious.

When the constitutional conditions described above are associated with disorders of the upper air-tube apparatus simulating pulmonary consumption, I have observed a fixedness of the local disease, more particularly when the general conditions have not early met with special treatment. On the other hand, when the local treatment has been reinforced by remedial measures addressed to the special general state, the relief of the patient has, for the most part, been early and very satisfactory. This offers an excellent practical reason for the physician, in all cases, to make himself acquainted with the general habit of the patient to be gleaned by his aspect, and by his individual and family history. Such a knowledge and such an inquiry are more particularly imperative in obstinate cases.

It need not be added that local means in cases associated with such general conditions as have been above referred to, demand co-operation from the general treatment indicated by the special associated state.

CHAPTER V.

AUSCULTATION—ABSENCE OF CHEST SIGNS—PRESENCE OF NECK SIGNS—ABSENCE OF INTERRUPTED RHONCHUS—CONSTRICTION SOUND—CRACKLE—THE VOICE—THE COUGH.

In cases of disorder of the cervical portion of the air-tube apparatus simulating pulmonary consumption, the careful application of the tests of physical exploration suffices to declare with all but certainty in every case the true nature of the malady, and the comparative safety of the patient.

In the first place, a large body of negative evidence is procured by the examination of the chest—none, or very few, of those signs being present which we find in pulmonary consumption. Except in a few examples of simulated pulmonary consumption, percussion gives the clear, long-continued resonance of healthy, or of more than usually air-holding lung, and it is symmetrical. The motion is ample, and except in very exceptional cases, such as those combined with malformation of the chest, or old pneumonic condensation, it also is symmetrical. The humid crackle in the apices of the lung is absent, except in a very few cases of liquid bronchitis, the value of which is usually to be made out by the presence of more or less sibilus or bronchitis, and the absence of dulness on percussion. Chamber or cavity sounds are not commonly to be discovered, but it must be admitted that, in a few exceptional cases, air-chamber sounds, with loud noise and air-chamber crackling, are to be discovered in throat affections, not combined with tubercle of the lung, but this is a very rare occurrence. When these signs are made out, the throat affection is combined with bronchitis

and emphysema, and with dilatation of one or more of the chief bronchi, in these cases the percussion being clear, over clear, and sibilant and sonorous rhonchi, or wheezing, being present throughout the chest, generally with comparatively little emaciation of the body, the bronchial character of the malady is indicated. The presence of diseased heart supports the non-tubercular view—organic disease of the heart is meant.

It is also to be admitted that throat affections, simulating phthisis, or tubercle of the lung, are met with, but as extreme rarities, in which the throat affection is combined with consolidation of the lung, the result of pneumonia, a cirrhose state in which the voice becomes very loud above, and simulative of the cavernous character, in consequence of the contracted and pressed-upon air-tubes below refusing to *disperse* the voice as usual throughout the lung structure, causing reverberation above. The heart is often displaced more or less, especially at its base, in consequence of the traction of the contracting lung giving rise to undue loudness, and to undue impulse at unwonted parts of the chest.

In examples of throat disorders simulating pulmonary consumption, I regard as a very valuable piece of negative evidence of the non-pulmonary tubercular character of the malady, the absence of an auscultatory sign I have very frequently discovered in cases of the early and yet scanty deposition of tubercle in the apices. I refer to an interrupted or divided friction-like sound or rhonchus. The sound is coarse, and three or four or five divisions, well-marked, are made out in a single inspiration or expiration. It resembles the sound of two pieces of coarse cloth slowly rubbed upon each other in contrary directions. The motion not being continuous, the sound is interrupted. Its *locale* is usually one shoulder; it is sometimes found at both. It is heard best above, between the scapula and the clavicle; at the scapular region; and it is sometimes most audible at the head of the humerus. It does not proceed from pleural friction, but from the repeated obstructions to the passage

of the inspired air-column through the finest bronchial tubes, from the pressure of tubercular material.

This sound, to which little attention has been paid, is sometimes mixed with the well-known click and fine, humid, distinct crackle of early phthisis. This sign is very inconstant: heard now, it may be inaudible in a few minutes. It may continue for days, then stop for hours, but to return with certainty, and remain with slight intervals until the tubercular deposit shall be absorbed or become softened, and give rise to cavernules and cavities. The presence of this auscultatory sign, and its amount, are a good deal affected by the quantity of the secretion of the mucous membrane of the fine bronchial tubes, and in consequence the sound under consideration varies considerably with the state of the weather, and with the varying amount of watery vapour in the atmosphere. I have found this interrupted, coarse, friction-like sound to become more marked during the prevalence of cold, dry winds. When this sound has disappeared in the breaking-down lung, it is often heard in the apex of the opposite one, usually regarded as healthy, but now really becoming the seat of tubercular deposit. For some years past I have called attention to this important sign, at the Consumption Hospital, Bromptom. I regard the *absence* of it in throat affections simulating pulmonary tubercle as a very important piece of negative absence. Its presence I hold as very suspicious in respect of the lung, and its permanent absence as a very material fact in support of the disorder of the patient being one chiefly of the throat or its adjacent parts. It is for these reasons I have thus dilated upon it in this place. I do not mean to say that this sign is necessarily associated with tubercle, but it is almost always so associated.

In examples of throat disorder simulating pulmonary consumption, while auscultation applied to the chest affords most valuable evidence of the absence of signs observed in tubercle of the lung, with the exceptions already stated, and more particularly of the coarse tube blowing inspiration and expiration likewise unduly prolonged. Applied

to the neck it gives positive and readily appreciable testimony of the presence of disease in the upper part of the air-tube apparatus, in the forms of altered respiration sounds, adventitious sounds, and of alterations of the voice.

The most common form of alteration of the respiration in the upper part of the air-tube apparatus is a high-pitched constrictive quality very easily recognised, and seated, according to the locality of the disease, at the glottis, at the larynx, or the narrows of the trachea, immediately above its bifurcation. The constriction sound pervades all parts, but it is most intense where the disease is immediately located, and the greatest intensity is, as respects locality, ascertained with perfect ease by the use, simultaneous or successive, of the two limbs of my differential stethoscope. The most intense constriction is heard in that ear connected with the immediate seat of disease. In cases of severe constriction sound of the trachea some degree of constriction sound is also heard at the upper part of the sternum and under the clavicles ; but the origin of the sound is proved to be in the throat, and not in the lung or chest, by the ear connected with the limb of the differential stethoscope, again connected with the *throat*, having the constriction sound in its louder degree.

This constrictive condition of respiration sound is heard all over the neck, from the hyoid bone above to the upper border of the sternum below in front, from the inferior angle of the jaw down to the scapular extremity of the clavicle at the side, and from the lower part of the occiput down to the second dorsal vertebra—the level of the bifurcation of the trachea, behind. In some examples of constrictive respiration dependent upon enlarged tonsils and some thickening of the mucous membrane of the glottis and larynx, the great extent to which the sound exists at the nape of the neck is remarkable, and its abatement and final disappearance, as the stethoscope is made to travel down the neck into the interscapular regions, are highly striking and instructive, suggesting that the disorder is located in the

neck, and not in the chest, a point of the greatest pathological and therapeutical importance.

The duration of the inspiration and of the expiration in cases of throat disorder simulating tubercle of the lung is increased, and in some cases scarcely any pause between the sounds of inspiration and expiration and those of expiration and inspiration can be made out.

Large, moist, bubble-bursting sounds in the neck are in many examples of throat disease made out by placing the stethoscope upon the larynx or in the course of the trachea. This occurs, of course, where the secretions are in abundance, and these may be pus or mucus, with or without extravasated blood. These sounds may be heard in any part of the neck, back or front, but they are loudest at the particular seat of the disease most deeply implicated.

Small bubble-bursting sounds are also not unfrequently heard in the same parts, and these occur when the secretion is more scanty. These sounds are sometimes called crepitations, large and small. When they are heard in the course of the neck, and when they are absent in the chest, and when the respiration, the voice, and the percussion sounds are normal throughout the chest, no doubt need be felt in regarding the upper part of the air-tube apparatus as the seat of the main disease, and the local disorder there situated as the cause, for the most part, of the deteriorated general health of the patient.

In some of the more severe throat affections simulating pulmonary consumption, the respiration at the apices acquires a rough and constrictive character, and the expiration becomes long, and thus a simulation of lung disease is set up, even in respect of the auscultatory test. This occurs chiefly in cases marked by the narrowed condition of the lower part of the trachea, already fully described. Full and symmetrical expansion of the chest, long continued and symmetrical resonance on percussion, absence of humid crackling, of air-chamber signs, and of the divided friction-like rhonchus, combined with high constrictive respiration in the trachea, serve to justify the

location of the disease in that part or the adjoining structures.

The stethoscope applied over the front of the neck, in many cases of disorder simulating pulmonary consumption, conveys to the ear a husky voice. Sometimes the voice is unduly resonant and loud, and this seems to arise from a moderate amount of narrowing at the glottis, and sometimes from a moderate amount of undue narrowing of the trachea, above the bifurcation.

The mechanism seems to be that reverberation of sound which obtains in *moderately* shut-in cavities or tubes, the same as we discover in narrow lanes and passages. A brazen or metallic voice is sometimes heard through the stethoscope, and this arises from a dry condition of the tube.

The cough, in many cases, heard through the stethoscope is extremely loud and explosive. Sometimes it is brazen or metallic, and this, like the voice, seems to depend upon a dry condition of the air-tube, associated with a spasmodic state. The explosion, hissing, and abrupt barking sounds, already referred to, are conveyed to the ear in remarkable force, through the stethoscope placed upon the throat.

CHAPTER VI.

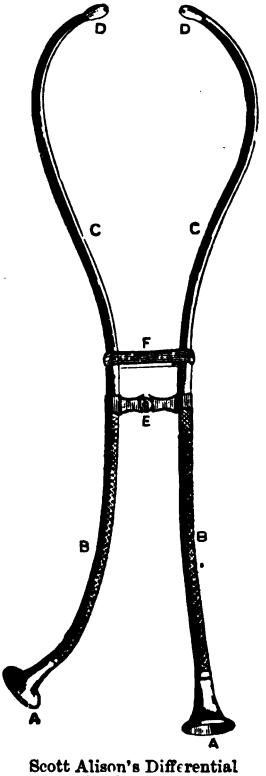
CERVICAL REGIONS—FLEXIBLE STETHOSCOPES—DR. SCOTT ALISON'S DIFFERENTIAL STETHOSCOPE—DR. CAMAN'S DOUBLE STETHOSCOPE—LARYNGOSCOPE.

For stethoscopic purposes, the neck may be divided into regions after the following simple manner—viz., an anterior region and a posterior region on either side. One line for the anterior region is drawn from the middle of the hyoid bone to the middle of the upper edge of the sternum. A line drawn from the mastoid process of the temporal bone passing down the neck to the acromion process forms the posterior boundary, and separates the anterior from the posterior region. The posterior region is bounded behind by the spines of the cervical vertebræ. These two great divisions of the neck may be again subdivided into superior and inferior by a line drawn round the neck from the cricoid cartilage of the larynx to the spinous process of the fourth cervical vertebra.

The superior anterior cervical region would include the glottis and the larynx, and might be called the laryngeal region, while the inferior cervical region would include the trachea and the narrows immediately above the bifurcation. The superior posterior cervical region extending from the occiput to the spine of the fourth cervical vertebra would include the pharynx, the posterior nares and the posterior aspect of the tonsils.

The auscultation of the throat may be effected with the ordinary wooden stethoscope, but the flexible stethoscope of Caman, or the differential stethoscope of the writer, is greatly

preferable. The air sounds of the throat are well made out with Caman's instrument; the sounds are well collected by the cup without undue pressure upon the comparatively tender and yielding neck, and they are distinctly perceived by the two ears being employed upon them. The same advantages are procured by the differential stethoscope, but the additional advantage of very ready location of the seat of disease appertains to the latter by its possessing two sound-collecting cups, placed at different spots of the neck, and connected with the two ears respectively.



Scott Alison's Differential Stethoscope.

The absence of pressure on the neck, which the flexible stethoscopes afford, gives them a very great superiority over the ordinary wooden stethoscope; and if we regard this fact, and also bear in mind, in the case of children, the advantage we enjoy with these instruments, of sitting in front of the patients and almost of amusing them, we shall come to the conclusion that any examination of the throat must be imperfect and incomplete without one or other of them.

The differential stethoscope has two tubes—one for each ear—and instead of communicating with one collecting cup only, as in the case of the double (Caman's) stethoscope, they have each a separate cup A A. It presents a separate stethoscope for each ear. These stethoscopes are mecha-

nically combined for facility of management, but they are as sound-collectors totally separate. The tubes are partly made of metal, C C, and partly of elastic tube, B B, to admit of some degree of motion. The two tubes are connected together, as in Caman's stethoscope, by a jointed metal bar, E, and an india-rubber band, F. There are two ear knobs, D D, of ivory for insertion into the two ears respectively.

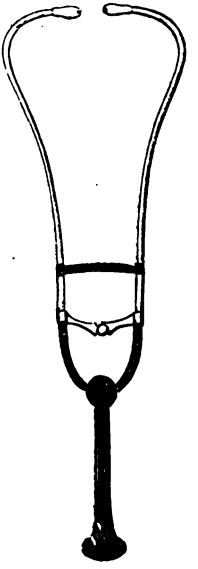
The principle of Caman's instrument, and indeed of any other double stethoscope, is very different from that of the differential stethoscope. The double stethoscope enables us to hear the sound of the same part with both ears,—virtually to place both ears upon one part of the chest, and thus receive a simply heightened sensation. The differential stethoscope enables us to do more than this; we hear, or deal with, the sounds of two parts at the same moment, and virtually place our two ears upon two different parts of the chest at the same instant. While the double stethoscope of Caman, having only one sound collector, cannot be converted into a differential stethoscope, by collecting sounds from two parts of the chest at once, the differential stethocope may be made simply a double stethoscope by placing its two sound-collecting cups upon the same part of the chest. The property which my differential stethoscope possesses of eclipsing a minor auditory impression in one ear, upon conveying a major amount of the same sound into the other ear, is of very great value in practice. When the respiration or vocal sound in one part of the throat or chest is weaker than in another part, this is signified in an unmistakable manner by the sound being heard in that ear, and in that ear only, connected with that part of the body emitting the larger amount of sound. One ear monopolises the sensation, as it were, and the other is deprived of all sensation, as it were; for we seem to hear only through one ear—viz., the more favoured one.

It was from observing the utility of Caman's stethoscope, as used by Dr. J. Edward Pollock, in 1856, at the Brompton Hospital, that I was led to think of the differential one. As was before mentioned the mechanism is much

the same, but in point of acoustic results the two instruments are very different, as I have more fully explained in my work on the 'Physical Examination of the Chest in Pulmonary Consumption," published in 1861.

It may be useful to say, and it is done from no feeling of vanity or undue partiality that, the differential stethoscope is used in many distant parts of the globe, and that, some of the first stethoscopists in the world have been the most earnest in its recommendation. Gairdner, of Glasgow; Hughes Bennet, of Edinburgh; Bree, of Colchester; Mackinnon, of Netley Hospital; and Frank, of Mentone, were among the first to appreciate the value of the differential stethoscope.

These flexible instruments are so specially suited for the auscultation of the neck, and to such an extent, as to seem to me to justify this short account of them in this communication.



Caman's Double Stethoscope.

The laryngoscope hitherto has purposely been left unnoticed in this paper, for it has been a primary consideration with me to enforce the propriety of auscultating the neck, and indeed of regarding that region as only second to the chest in its call for the employment of the stethoscope. In all cases of simulated consumption, combined with throat symptoms, it is incumbent upon the practitioner to employ the laryngoscope and obtain for his guidance in the relief of the patient the benefit of ocular inspection. On the mode of employing this instrument, or series of instruments, it is not my intention here to dilate. So much has been written on the subject, both

abroad and in this country, that the reader can be at no loss for information.

The writings of Gibb, Morell MacKenzie, George Johnson, and Prosser James, are, perhaps, the most worthy of the attention of the English practitioner.

CHAPTER VII.

LOCAL TREATMENT.

THE treatment of throat disorders, including those simulating pulmonary consumption, although properly a secondary object in a paper more particularly devoted to diagnosis, deserves some notice here. It may be observed generally that the treatment of cases of simulated consumption when judiciously suited to the various conditions, both local and constitutional, which are present, is remarkable for its very happy results. The general health is restored, and the local sufferings are, in the majority of cases, speedily mitigated and ultimately abated.

The plan of treatment, or *ratio medendi*, may be divided in most cases into three parts—1st., that directed to the remedying of the general effects of the local disease upon the body; 2nd, that directed to the correction of the associated morbid habits of body, or cachexiæ, which frequently prevail in such cases, and play an important part in the origin of the local disorders, and in their persistence; and 3rd, that pointed to the local management of the throat disorders.

On all these heads a few words may be usefully expended. Local treatment alone in some cases is nearly all that is required; treatment directed to the correction of taint is the paramount consideration in some cases, such as the scrofulous and the syphilitic, and the constitutional treatment for the correction of grave injuries of the general health is a leading demand in cases of throat diseases of long standing, that have been misunderstood, and that

have given rise in the mind of the patient to grave alarm lest the loss of life should be the result.

The local treatment which I have found useful in disorders of the throat simulating pulmonary consumption, includes surgical means, the direct application of various agents in the solid form, in the liquid form, in the form of vapour and spray, the application of galvanism, of heat and cold, and the external use of liniments, fomentations and other means.

The surgical interference which I have found to be most useful has included the excision of the enlarged and over-active tonsil by the scalpel or the guillotine; the scarification of the tonsils in minor cases; the scarification of the pharynx and the amputation of the over-vascular and elongated uvula. These operations have frequently proved the effective means of at once bringing about a cure of the suspected disease of the lungs, and a total and immediate removal of all the symptoms which have annoyed and alarmed the patient.

The application of solids to the morbid parts of the upper air-tube apparatus has been most useful in the treatment of the cases of throat disorders simulating pulmonary consumption. In old standing cases of enlarged tonsil, in chronic pharyngitis with enlarged glandules, associated with morbid and excessive secretions, the application of the solid nitrate of silver has proved of immense service. It has also proved of great value when the uvula has been found long, large, and flabby.

The exhibition of troches, containing respectively tannic acid, bismuth, and chlorate of potash has been found very serviceable. In cases of relaxation, with flabby conditions and with excessive secretion, the tannic acid lozenge has done great service. When there has been a fair amount of secretion, or a little excess, with nervous irritation and tickling sensation, the bismuth lozenge has given good results; and when there has been hypertrophy, with congestive action, over-vascularity, and reduced secretions, the chlorate of potash lozenge has rendered pre-eminent

service. Morphia and opium, which are frequently prescribed in throat disorders, I have not employed in the cases under consideration, for these agents are calculated to impair digestion and the nutritive functions already frequently in fault, and when given in the shape of lozenge are liable to be taken in dangerous excess. I deprecate the use of such important medicines in so familiar a form as a lozenge. The gum and the tragacanth lozenge are safe, and may be given almost *ad libitum* in cases marked with constant irritative hemming; they are perfectly safe in the hands of the patient. Perhaps it is not trifling to say that, the various preparations of chocolate have been at once grateful to the patient, sedative and nutritious. The lozenge of the French Company, to be obtained of Fortnum and Mason, Piccadilly, is worthy of recommendation.

Agents in the liquid form have been found very serviceable. These have been employed, firstly, in the form of gargle; secondly, they have been taken into the mouth and slowly swallowed; and, thirdly, they have been applied by means of brushes and sponges. Gargles of chlorate of potash and borate of soda have proved of great use. They have imparted a healthy action to weakly congested tonsils and to the pharynx, and have promoted the healthy secretions of these parts. Gargles of tannic acid, of oak-bark decoction, of hydrochloric, and of sulphuric acid, have given tone to the parts affected with old standing congestion, with over secretion, and with varicose veins. Gargles of honey and acetic acid, and of honey and citric acid, or lemon juice, have also proved of use in promoting tone and healthy secretion, as well as in allaying over sensibility, and they have this negative advantage, that they may be used pretty largely without any injury or the risk of injury even with young patients. I have found them perfectly innocent.

Lincti, usually composed of medical agents of an innocent nature, and of treacle, or honey, or sugar, are frequently found of use; they have proved of decided service in many cases treated by myself. In this form the

agent is applied for some time to the parts and ultmately allowed to pass down the œsophagus. The most useful have been composed of nitric acid, sulphuric acid, acetic acid, and phosphoric acid.

Glycerin, used after this fashion, has proved of great use in many cases marked with sense of dryness and tickling. Oil, employed in the same manner, is useful, and it may be sometimes advantageously conjoined with honey.

Solutions of many agents, and liquids have been largely and beneficially employed by myself in cases of throat disease, simulating pulmonary consumption, applied by means of sponges and brushes. The sponge has been fixed, as usual, to the end of a whalebone-stem, variously bent, and the brushes have been of various sizes, generally large, and having handles bent so as to reach, conveniently, the parts most affected. The brushes have been generally composed of camel-hair, but a very useful brush, remarkable for cleanliness, is made of spun-glass, and may be procured of our best chemists.

The familiar solution of nitrate of silver, long applied in this manner by the profession, has afforded to my patients great alleviation of irritation and congestive action, and has imparted a healthier condition to the morbid parts. In the same manner, the solution of bichloride of mercury has been used, especially in syphilitic cases. In my little work on the Medication of the Larynx and Trachea, published in 1853, I recommended the application, in this fashion, of oil, glycerin, cod liver oil, mucilage, and some active agents, and I have found their employment, in the class of cases under consideration very useful.

Inhalations have been largely employed in the treatment of cases of throat disease simulating pulmonary consumption coming under my care, and they have proved of great service when the disorder has been seated low down in the trachea.

The vapour of hot water, perhaps, has been the most generally useful of all the inhalations which I have em-

ployed. It has been in cases of constriction or coarctation of the trachea, deficient secretions and moderate spasmodic action, that this form of application has been most serviceable. The vapour has been clearly inhaled through various inhalers, such as those of Nelson Edwards, and Maw, but I have found excellent results from the employment of a common earthenware jug with a narrow mouth covered with a handkerchief of muslin or cambric.

The inhalations of chloric ether, conium, hops, as prescribed in the Pharmacopœia of the Consumption Hospital, Brompton, have been most useful when irritant spasmodic action has suggested the use of sedatives. The inhalation of camphor with the vapour of hot water has been found of use when moderate stimulation has been indicated.

The inhalation of the vapour of some hot mineral waters chiefly sulphureous, is calculated to be useful in some cases.

Sprays have also proved of great use in cases of disease situated low down. The agents I have employed have been solutions of nitrate of silver, tannic acid and acetate of lead. The instruments employed have been those of Biegel.

The spray of sea-water, as naturally found in the atmosphere of the coast in stormy weather, has proved of use in some cases of throat disease marked by atony in debilitated and scrofulous patients. The spray of mineral waters has likewise proved of use in some cases. The sulphureous waters have been useful in this way.

Galvanism applied to the larynx and trachea has proved of some advantage, but chiefly in cases of atony of the muscles of the larynx, and attended with moderate aphonia, and free from ulceration, in hysterical girls.

I cannot say that the results have in general been equal to the expectations of patients, but sudden cures do occasionally occur.

The instruments best suited for the application of galvanism, are those of Dr. Morell Mackenzie; it is with his instruments that I am most conversant.

The management of the trachea and larynx in vocal and respiratory exertions is not to be disregarded in the treatment of throat affections. Hurried respiratory efforts are generally to be avoided, loud and protracted and rapid speaking is usually hurtful, and singing, particularly at a high pitch is often highly injurious.

Besides the application of agents directly made to the interior of the throat, &c., I have largely employed agents addressed to the exterior, and this branch of treatment is one of very considerable importance, and will in practice prove a valuable co-operative agency in the treatment, and should not be lost sight of by the practitioner.

When the disorder of the throat has given signs of activity with congestion and swelling, together with a reduced amount of secretion, the local application of fomentations proves useful. I have largely employed them in such affections, more particularly when developed in the larynx, the narrows, or angustiæ of the trachea, and at its bifurcation. The linseed cataplasm has given relief, and this may sometimes be the most available means, but it has the disadvantage of weight, and unless covered up with flannel is, in this climate, particularly in winter, liable to become soon cold. The fomentation of spongio-piline made to fit to the front of the neck, and it may be to the upper part of the chest at the sternum, is more convenient, and may be kept applied for almost any length of time. I have found the very greatest advantage from this application. When a little stimulation of the skin is desired, the hot water in which the spongio-piline is to be soaked may be faintly coloured with mustard flour, a small teaspoonful of the flour being added, say to half a pint of water. With children such a stimulant must not be applied too strong or for a length of time, and diligent attention is necessary with this as with everything relating to the medical treatment of young subjects.

Blisters applied to the throat have been generally condemned by the profession on account of the danger of inflammatory action caused by the application spreading to

the interior of the air-tube. I have not employed them nearer than the upper part of the sternum. At that part a small blister, the size of a crown piece, in the case of adults, and of a shilling in the case of children, applied for an hour or two, has done good service in obstinate cases of vascular over-action of the narrows of the trachea.

Some degree of counter-irritation of the neck and of the upper sternal region, I generally employ in *all* cases of serious implication of the throat, whether merely simulating consumption or accompanying it, except in the dying state. I generally paint with iodine on either side of the trachea to the extent, in the adult, of an inch in length, and half an inch in breadth, and over a space about the size of a florin at the upper part of the sternum. I avoid painting over the larynx lest chafing should give rise to sores, which I have sometimes seen produced to a troublesome extent. When the pharynx and tonsils are affected I sometimes paint the nape of the neck to the extent of a florin. The strength of the iodine paint I have employed for adults has been twenty grains to half an ounce of rectified spirits of wine. This produces a sense of heat, a blush around, and a mealy state of the skin some hours after, which continues for days, from a quickened production of the epidermis. The application is renewed in a day or two, according to the effects produced.

For children, the paint should be weaker, and it is desirable to bear in mind that the skin at the front of the neck is more sensitive than the skin at the nape, or at the upper part of the chest.

Liniments, in cases of throat disease, render good service. In cases of general tenderness of the throat, the patient obtains relief by the general and gentle application of such liniments as those of chloroform and of soap. It is necessary to apply them gently; but they may be freely used as regards space, back and front, and also over the upper part of the chest.

I have found exhausted and dying patients suffering

from dysphagia to experience great relief from the chloroform liniment, and indeed it has in some such cases proved the only external application that the patient could tolerate.

The mustard liniment of the British Pharmacopœia, applied to the lower part of the neck and over the upper part of the sternum, has produced in some cases immediate and beneficial stimulation of the skin.

The abstraction of blood to a limited extent from the neck or upper part of the chest will only seldom be desirable; but I have met with cases of active congestion of the larynx and trachea simulating, and also accompanying pulmonary consumption, in which the application of leeches has not only appeared to be indicated, but in which the loss of blood through their means has been very useful. It has relieved symptoms immediately, and has appeared to produce that local state of things necessary for the early and full beneficial effect of other means. This application of leeches will be found admissible in cases marked with urgent dyspnœa, hot skin, and full, quickened pulse. I have known the best results to follow the application of one or two leeches to the lower part of the neck or upper part of the chest. A point at the upper part of the sternum is a good one; no risk of inflammatory action of the skin need be apprehended, and the sternum offers a good means of resistance should pressure be required to bring excessive oozing of blood to an end.

The anæmic and scorbutic habit, and the wasted condition, offer, of course, difficulties in the way of this practice; but the sanguine and full habits, on the other hand, give facilities for its adoption.

CHAPTER VIII.

TREATMENT OF THE SYSTEM.

TREATMENT addressed to the system for the correction of general evils and local disorders at a distance resulting from, or accompanying the local disorder of the upper air-tube apparatus, is in many groups of cases of the utmost importance. In some groups we find great constitutional disturbance, a febrile state, debility, nervous irritability, wasting, dyspnœa, dyspepsia, dysmenorrhœa, diarrhœa, or constipation of the bowels, and these evils must be duly dealt with. Besides this, medicines and other agents applied not merely *locally*, we know serve to abate *local* mischief, and therefore find a place in a comprehensive plan of treatment.

In cases of throat disorders, particularly those simulating pulmonary consumption, a febrile or quasi febrile state will be found one of the most important forms of general disturbance, and treatment addressed to this state not only immediately obviates it, but such treatment in some cases is almost immediately followed by the entire removal of the local throat disease. The treatment which has produced these results has included more particularly preparations of bismuth, potash, and soda. These have been given singly; but in combination, the happiest effects have resulted. When no flatus has oppressed the stomach and bowels, I have ordered these medicines—the two last in the form of bi-carbonate—to be taken with citric acid, so as to produce grateful effervescence. I generally order the citric acid in solution

combined with syrup of tolu, of lemon juice, or orange peel; and when there is atony of the stomach, the tincture of nux vomica or the compound tincture of chloroform, these latter, viz., the nux vomica and chloroform tinctures being ordered in doses of 10 drops.

When in combination with the febrile state we have dryness of the air passages, ipecacuanha wine may be added in small doses; but I have found ipecacuanha to be very disagreeable to the patient from its tendency to produce nausea; and I may add the rather important fact that, the patient is often injuriously nauseated, injuriously chiefly to himself, no doubt, with the practitioner who has prescribed it. In short, he has become sick of the doctor.

General nervous irritability, common more particularly in females, has demanded the exhibition of hyoscyamus, extract of Indian hemp, camphor, ether, assafœtida, lavender and ammonia. Opium has been given occasionally to procure sleep, but its continuous employment has not been adopted except in rare cases, on account of the interference it causes with the functions of the stomach, bowels, liver, and kidney.

Wasting has been met by the exhibition of cod-liver oil in moderate doses. I have lately found Möller's to be very efficacious and as little disagreeable as any. Nourishing diet, including butchers' meat, potatoes, and butter, with milk and eggs, have reinstated many wasted hospital patients in their wonted condition.

The demulcent decoction of the slippery elm, a native of Canada, has proved an admirable vehicle for bismuth in cases of irritability of stomach, accompanied with pain and retching.

When severe vomiting has characterised throat disorders simulating or accompanying phthisis, great relief has been obtained by the exhibition of ice, lime water with cow or ass's milk, the effervescing draught of bicarbonate of soda, alone or combined with two or three drops of chloroform, or twenty drops of compound tinc-

ture of chloroform, or with ten drops of tincture of nux vomica. A good reserve has not unfrequently been found in the exhibition of one or more pills, each containing half a grain of opium and one drop of creosote. Vomiting, which had for weeks defied every usual remedy, has been at once and altogether controlled by the exhibition of one or two such pills. This has occurred in many cases.

Dyspepsia of an atonic character has been successfully dealt with by the exhibition of vegetable bitters, such as cinchona, gentian, quassia, chirayta, cammomile, tannic acid, and cascarilla. Preparations of iron, bismuth, zinc, and the mineral acids, such as sulphuric, hydrochloric, and nitric, have been very useful. Phosphoric acid in combination with a vegetable infusion has done good services Dyspepsia, with irritability, vomiting, and retching, had been dealt with very successfully with bi-carbonate of soda, bismuth, and magnesia, with water or a mild bitter infusion, and in combination with hydrocyanic acid.

Diarrhœa, constipation of the bowels, and dysmenorrhœa, have frequently demanded attention ; and these disorders, if neglected, will interfere for the most part with any treatment that may be adopted, and of course with the recovery of the patient. The particular means adapted to these conditions are so obvious that they need not be detailed here. I would, however, utter a word of caution respecting the old-fashioned domestic, and now in some quarters, the much extolled practice of administering castor oil in cases of diarrhœa. When no accumulation or irritant materials are present in the bowels, such treatment is simply illogical and calculated to be disagreeable and injurious to the patient. I cannot either approve of sulphuric acid, for I have found this to be a comparatively irritant, cold, and unkindly body.

In cases of irritability of the mucous membrane of the alimentary canal, either in part or in the whole of its course, the diet must be strictly directed. Beef, in the form of Liebig's Extractum Carnis, has been found most

useful; and the farinaceous articles of diet, with milk and eggs, have proved of permanent value. Liebig's beef biscuits, prepared by Peak and Freen, have been tolerated in the stomach in a remarkable manner. I have lately made trial of Coleman's extract, biscuits and lozenges of beef, the first prepared by Tooth, of Sydney, in Australia, and I have no hesitation in recommending them. I have myself prepared in one minute an admirable half-pint of beef-tea with half a teaspoonful of the extract: I have nowhere or at any time tasted its equal.

The temperature and purity of the atmosphere which the patient, suffering from throat disorder simulating pulmonary consumption, inhales, have been found to demand the utmost attention. In all cases of disease of this class, coldness of the atmosphere, alternations of the temperature, and impurities of the air which has been respired, have acted an important *rôle* in the production of the malady. Sometimes these have acted alone, and sometimes they have operated in combination with the morbid conditions of the general system, such as have already been mentioned. It is, therefore, obvious that, the atmosphere cannot with impunity be disregarded in our plan of treatment. It has been found necessary to withdraw patients from warehouses, shops, and factories where it has been impracticable to avoid impurities in those places; and under this arrangement the obstinate disease has become the tractable one.

The winter temperature of the atmosphere in this climate has been found to offer the greatest impediment to the cure of these maladies, and it has been necessary to send many private patients to milder climates at a distance. This has been the more necessary where a tubucular or strumous diathesis has increased the danger of the patient. Patients who have had that irritable condition of trachea, which has done best in an uniformly mild and equable climate, have found great advantage from a winter residence at Pau. Others, in whom there has predominated relaxation, with fair

general health, free from febrile conditions, have derived great advantage from winter residence in Nice and Mentone. When the patient has suffered also from a herpetic diathesis, a sojourn for a few weeks in May and June at the Eaux Bonnes, in the Pyrenees, after spending the winter at Pau or in the North of Italy, has seemed to give permanence to the advantages derived from an absence from this country during the winter. The irritable glottis, the congested larynx, and the narrowed and spasmodic trachea have in many cases been greatly improved by removal from the pungent cold of England's winter.

When circumstances have precluded removal to foreign places of residence, other means, though inferior, have done good service. A warm locality in this country on the coast, removal to a milder quarter of London than that previously inhabited, as to Brompton or Kensington, the warming of the house or apartment by means of *ample* fires, and the prevention of the entrance of *undue* quantities of cold air from the exterior, and even the warming by means of the respirator have contributed to disarm the winter cold of its previous injurious influence.

In many examples of throat disorder simulating pulmonary consumption, I have found the pure and mild atmosphere of the Brompton Hospital to produce the very best effects upon the patient during the short period he has been kept under inspection and medical surveillance. The patient, the subject of simulated phthisis, is seldom or never discharged after only one examination, but is kept a reasonable time for confirmatory evidence. In this way alone the Hospital has rendered services to the public of the greatest importance and contributed to the saving to society of many valuable lives. The atmosphere has been kept during winter at one uniform temperature of 60° Fahrenheit. One wing of the Hospital is warmed by means of heated air, and the other by means of hot water. This important fact, that the Brompton Hospital, in cases of throat disease simulating pulmonary

consumption, has largely contributed to the cure of patients, will amply supply in the estimation of practical men an answer to the objection which may be started, that, in the treating of such cases the benefits of that institution are being diverted from the proper objects of the Hospital, which was founded for the purpose of treating those only suffering from consumption and other affections of the chest. In this matter we can only do what is possible. What human skill shall at once, in many instances declare with certainty the absence of tubercle? What an injury to the patient really affected with incipient tubercle of the lung to be turned away! What a discomfort to the physician of the Hospital such an occurrence would be,—what good cause it would give for regret on the part of the supporters of the institution! Better far that some patients suffering from only simulating consumption should be received, and be restored to health, than that one really consumptive person should be neglected!

In cases of great ulceration of the larnyx accompanying pulmonary consumption, the physician can seldom recommend residence abroad. Death is usually so near at hand as to forbid absence from home, relatives, and friends, I may even say from the tenderly loved parish churchyard, or the rural cemetery where rest the patient's kin, departed, not forgotten.

In the selection of a place of residence for winter the physician has to regard the usual habitat of the patient. Thus, a few days ago, I gave a preference in some degree to Algeria and the Canary Islands, because the patient was a Spaniard, the first place being accessible from Spain, and the islands being under the dominion of the Spanish Crown. Of course the medical requirements of the case ought to form the first element in our judgment, but other circumstances nevertheless are often important; for a few degrees of temperature, we would not wantonly separate a girl from her lover.

The summer climate for chronic cases of throat disease

simulating consumption with general debility may be found at Spa, in Belgium, the numerous sea resorts along the east and western coasts of England and Scotland; and the bracing and varied climates of a sea voyage around the British Isles, or along the coasts of Norway and Sweden, will frequently succeed in at once imparting tone to the throat and its appendages, and vastly improve the condition of the general health, and remove many associated local evils.

Lastly, I would press upon the practitioner that, the knowledge of the features of this or that health resort, and a loose general conviction of the nature or even the stage of the disease of the patient, will not suffice to make a good selection of climate. The actual position of the disease, its leading features, its probabilities, possibilities, and impossibilities, to be gleaned from its history, and from the knowledge of the lædentia, and adjuvantia, in the individual case, must be regarded quite as much as the average temperature and moisture, and the geological formations of proposed health resorts. We must bear in mind that the active disease of to-day may become the passive one of to-morrow, that humid disease may rapidly become dry disease, and even dry disease humid disease; that the patient who has long derived advantage from residence abroad may at length become so greatly exhausted in vitality as to be grievously wronged by any removal whatever from his home.

CHAPTER IX.

TREATMENT OF ASSOCIATED CACHEXIÆ.

In a previous paper the morbid conditions of the system which have been found to complicate disorders of the trachea and other parts of the upper air-tube apparatus, simulating pulmonary consumption, were enumerated. It was pointed out that cases so associated were remarkable for obstinacy, more particularly when the associated general morbid conditions were not early recognised, and were not duly subjected to that general treatment applicable to the constitutional evil.

The remarkable obstinacy observed in such cases has, happily, in a large proportion of cases, been speedily brought to an end by the adoption of suitable general means, and so much depends in this class of cases on such management, that I have deemed it right to dwell at some length on the chief morbid cachexiæ or taints which we find most frequently associated with the disorders under consideration.

The Scrofulous Cachexia.—When the associated cachexia has been the scrofulous one, the best results have been obtained by residence at the sea-coast, by regular and ample exercise, the strength of the patient being duly regarded, by the administration of medicines calculated to give tone and increased vitality to the solids, and to the thorough production of a healthy, well organised, and well proportioned blood. The temperature of the body has demanded nice management; the avoidance of excessive and long continued cold in winter, and of long continued over-

exciting dry heat, or of relaxing, hot, moist air in summer, and a suitable adaptation of clothing to the various seasons, and even the transitory alternations of the temperature of the surrounding atmosphere.

When debility has been a marked feature without febrile action, the preparations of iron have been most serviceable; the iodide, the ammonio-chloride, the ammonio-citrate, and the phosphate have afforded the best results. When there have been associated great relaxation and languid, oozing, cold sweatings, the tincture of the perchloride has quickly imparted tone to the system.

Iron, in the form of mineral waters taken at their source, has done much good; and of these waters the Tunbridge and the Chalybeate of Buxton found, as they are, in bracing localities, are eminently calculated to correct the scrofulous taint or cachexia. Cod-liver oil and vegetable tonics have contributed much good. Salt water baths, warm in winter and cold in summer, have greatly contributed to the invigoration of the general health in the scrofulous cachexia.

The syphilitic taint demands general treatment. Mercury in moderation, given so as to act as an alterative, and to invisibly promote the secretions of the skin and the various emunctories of the body, has been found very necessary. But I have found great caution to be required in its administration. With the irritable mucous membrane of the alimentary canal, it is incompatible except in very minute doses, and guarded by combination with hyoscyamus or a very small portion of opium. When a febrile state prevails, with a furred tongue, thirst, and active inflammatory action of the tonsils and velum, the exhibition of mercury may induce destructive ulceration or gangrene. A young man with the syphilitic taint consulted me very lately; he was extremely emaciated, had a phthisical aspect, and had much cough and great hoarseness. The pulse was very active, the tongue was covered with yellow fur, and the velum palati was perforated and presented ragged edges. To endeavour to heal the parts

while the system was so disturbed seemed visionary, and to give mercury was likely to aggravate the ulcerative and destructive action; he was therefore put upon a course of saline treatment, and tranquillity of the body was enjoined by confinement to bed at first. In the course of ten days he returned, with a quiet pulse and clean tongue, and all the wounds smaller and disposed to heal up. Small doses of mercury were now ordered, but in combination with the saline treatment, and after some days the hoarseness and cough had entirely disappeared. The patient had lately contracted syphilis, and was at the time suffering from virulent gonorrhœa.

In chronic syphilitic taint, to which disorders of the trachea and other parts of the air-tube apparatus simulating pulmonary consumption is superadded, it has been found better to administer iodide of potassium or the bromide of potassium in small doses, long continued and given in combination with sarsaparilla. It is necessary, when there is much irritability of the mucous membrane of the fauces, to watch the effect of iodide of potassium, for it sometimes leads to sudden and great effusion of that part.

Warm bathing has been found a great corrective of this taint, and to aid the removal of the local mischief.

The gouty cachexia presents, for the most part, the simulative disorders of the upper air-tube apparatus, if not in a very formidable form yet manifesting very great obstinacy; and it is therefore necessary to deal at once with this general morbid condition. The gouty condition is, indeed, very frequently found in combination with the disorders of the trachea and fauces simulating pulmonary consumption.

Treatment directed solely to the local disease—*i.e.*, consisting of merely local appliances—will very generally fail to afford much relief, or to impart anything like permanency to what benefit they may chance at the time to impart. The persistent employment of the alkalies will be found very necessary. My experience in treatment of the

local disorders under consideration, when associated with the gouty condition of the system, has proved the superior efficacy of bicarbonate of potash. When, owing to irritability of the stomach, this remedy is ill borne, much advantage will result from the employment of bicarbonate of soda, and this may be reinforced by the carbonate of bismuth, whose valuable property of subduing irritation and combining with noxious and acrid secretions, is now so much required.

The action of the skin is to be promoted by the internal use of sulphur, and the greatest advantage is obtainable from the long-continued employment of hot, sulphureous, and saline baths, such as those of Bath, Buxton, and Harrogate in this country, and those of Baden-Baden and other well-known health resorts in France and Germany.

The internal administration of the mineral waters of the Eaux Bonnes, Bath, Cheltenham, Leamington, Harrogate, and Buxton, is pre-eminently useful, and in obstinate cases, and when the circumstances of the patient will permit, should on no account be omitted. Seltzer soda and Lithia water form excellent beverages, and when spirits are ordered may be made the medium for their administration. The value of a course of treatment of the nature now recommended was duly pointed out years ago by Dr. Gueneau de Mussy, of London, in his valuable work on "Angine Glanduleuse," a copious notice of which, by the writer of these papers, will be found in the *Medico-Chirurgical Review.*

Treatment of the Anæmic Condition.—The means of dealing with this condition are so generally known, and as I have no particular remedies to recommend, I shall content myself with doing little more than enforcing the necessity of this condition being recognised and duly and efficiently treated, even when the symptoms give a very great prominence to the local disorder. The employment of vegetable tonics, cold bathing, and the arrest of exhausting discharges are very necessary. Exhausting leucorrhœa and excessive catamenial discharge must be duly

with pulmonary consumption when about to end in death. The morbid state of the larynx gives rise, in the sinking patient afflicted with phthisis, to such cruel sufferings that a little time may be usefully and perhaps humanely employed in reciting the means which I have found most useful under such melancholy circumstances.

The red, the aphthous, and even the ulcerated conditions of some or all the parts seen on opening the mouth of the patient dying of pulmonary consumption, demand the kindly and careful consideration of the physician. Borax, citric acid, and mineral acid gargles are scarcely ever tolerated under such circumstances, being too irritant. Lincti of honey and olive oil, glycerine and oil, or glycerine and tannic acid, cakes of chocolate, and lozenges of bismuth and acacia afford much temporary relief, and are greatly prized by the poor sufferer in his lamentable state. The chocolate is found very serviceable ; it readily passes down the œsophagus and goes to supply, in some degree, the place of the usual food which the patient too frequently finds himself utterly unable to swallow. The lozenge of extract of beef, sold by Coleman and Co., of St. Mary-at-Hill, from extract manufactured by Tooth, of Sydney, in Australia, is an admirable form of nutritious, agreeable, and demulcent food, extremely valuable in such cases. I have sometimes found advantage from pencilling the aphthous parts with a very weak solution of nitrate of silver, two grains to the ounce of water.

The fearful difficulty of respiration which is sometimes observed in cases of pulmonary consumption about to terminate in death, and which proceeds from obstruction of the glottis, associated with destructive ulceration of the larynx, occasionally gives rise to a question respecting the propriety of performing tracheotomy. This question has frequently come before me, and not without some embarrassment on my part, for the actual good to be obtained by the operation is only a respite from death for a few days ; and to purchase this the patient has to pay, in pain, alarm, and even in some degree in danger of immediate death.

I have, under such circumstances, sought the aid of surgical skill; but the result has always been, that we have rested satisfied with mild temporary expedients, such as those referred to above, and with the use of the gentle inunction of the neck, with chloroform and camphor liniments, and with the employment of light fomentations, such as those of chamois leather soaked in hot water and covered with impermeable material, or of spongio-piline, moistened with hot water, nicely fitted to the throat.

M'GOWAN & DANKS, STEAM PRINTERS, 16 GREAT WINDMILL STREET, W.

BY THE SAME AUTHOR.

THE PHYSICAL EXAMINATION

OF

THE CHEST IN PULMONARY CONSUMPTION,

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